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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/939,083

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Arne Kristian Berglund

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10/04/2004

ERICSSON INC.  
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EXAMINER

SING, SIMON P

ART UNIT

PAPER NUMBER

2645

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/939,083

**Applicant(s)**

BERGLUND ET AL.

**Examiner**

Simon Sing

**Art Unit**

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09292004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 5 and 18 recite the limitation "said first control channel modulation scheme" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6-8, 11-14, 19-21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Scramm et al. WO 99/12303.

- 2.1 Regarding claims 1 and 13, Scramm discloses a method and system for block automatic re-transmission request with reselection of modulation. Scramm teaches:

transmitting from a base station RBS 22, controlled by a base station controller 16, a logical link control (LLC) frame (control signaling message) using a 16 QAM modulation (first modulation) (figure 3; page 9, lines 29-30; page 10, lines 1-10);

receiving a request for re-transmission from a mobile station 12 after decoded data is found to be erroneous (page 10, lines 11-16);

re-transmitting the LLC frame using a QPSK modulation (second modulation) (page 10, lines 17-20).

2.2 Regarding claims 6 and 19, Scramm teaches various modulations, such as Gaussian Minimum Shift Keying (GMSK), Quadrature Phase Shift Keying (QPSK) (page 2, lines 23-26).

2.3 Regarding claims 7 and 20, Scramm teaches that the bit rate of QPSK (second modulation) is half of 16 QAM (first modulation) (page 10, line 30; page 11, line 1).

2.4 Regarding claims 8 and 21, Scramm teaches that the first modulation (16QAM) is less robust (noise resistance) than the second modulation (QPSK) (page 10, lines 17-20).

2.5 Regarding claims 11 and 24, Scramm teaches that the mobile station 12 fails to understand a LLC message because of erroneous data, and transmits a request for re-

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transmission. Therefore, it is inherent that the mobile station 12 transmits on an old channel.

2.6 Regarding claim 12, Scramm teaches using an alternative modulation scheme (column 10, lines 23-35).

2.7 Regarding claim 14, as discussed in claim 13, the base station 22 is controlled by a base station controller 16 (figure 3; page 7, lines 22-23).

3. Claims 1 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Scheibel, Jr. et al. US 6,212,240.

Scheibel discloses a method and apparatus for conveying data between a gateway 107 and a mobile device 101 in figure 1 (column 2, lines 38-60). Scheibel teaches:

    sending a data message in data blocks from gateway 107, in a first modulation rate (16QAM);

    detecting an acknowledge from the mobile device 101, indicating data blocks not received; and

    retransmitting the data blocks in a second modulation rate (QPSK) (column 2, lines 19-30; column 3, lines 12-47).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 10, 15-17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scramm et al. WO 99/12303 in view of Dahlin et al. US 5,182,753.

4.1 Regarding claims 2-4 and 15-17, Scramm teaches transmitting a logical link control (LLC) message from the base station 22 to the mobile station 12 in bursts (figure 2; page 9, line 29 top page 10 line 2), but fails to teach that the LLC message is a handover message on a Fast Associated control channel (FACCH) using blank and burst.

However, Dahlin discloses a method and system for transmitting signaling messages in mobile communications. Dahlin teaches that handover control message messages are transmitted on FACCH (column1, lines 46-48), which using blank and burst (column 3, lines 27-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Scramm's reference with the teaching of Dahlin, so that the LLC message would have been a handover message and would have been transmitted on FACCH using blank and burst, because a handover message

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in one of logical link control messages, and using FACCH and blank and burst would have been a matter of design choice since both were well known in the art.

4.2 Regarding claims 10 and 23, the Scramm's reference, modified by Dahlin, teaches that the LLC is a handover control message, and the mobile station 12 sends a request for re-transmission since it fails to understand a LLC message because of erroneous data. Therefore, it is inherent that the request (for re-transmission) is a message indicating a failed handover.

5. Claims 5 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scramm et al. WO 99/12303 in view of Khullar et al. US 6,400,928.

Scramm teaches various modulations, such as Gaussian Minimum Shift Keying (GMSK), Quadrature Phase Shift Keying (QPSK) (page 2, lines 23-26), and Quadrature Amplitude Modulation, but fails to teach 8-PSK.

However, Khullar discloses a method and system for detection of modulation. Khullar teaches that in GSM system, both GMSK and 8-PSK modulations may be used (column 1, lines 10-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Scramm's reference with the teaching of Khullar, so that the LLC message would have been a handover message and would

have been modulated using 8-PSK, because using 8-PSK modulation would have been a matter of design choice.

6. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scramm et al. WO 99/12303 in view of Hill et al. US 5,694,454.

Scramm teaches transmitting a logical link control (LLC) message from the base station 22 to the mobile station 12, and receiving a request for re-transmission from the mobile station 12 (page 10, lines 11-16). Scramm fails to teach re-transmitting when no acknowledge message is received at the base station 22.

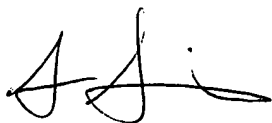
However, Hill discloses an apparatus for message re-transmission. Hill teaches transmitting a message from a base station 114 and waiting for an acknowledge message from a mobile device 118. When no acknowledge message is received, the base station 114 re-transmits the message (column 8, lines 43-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Scramm's reference with the teaching of Hill, so that the LLC message would have been re-transmitted if no acknowledge message was received by the base station 22, the base station 22 would have re-transmitted the LLC message, because such modification would have re-established communications in case the first transmission was not received by the mobile station 12 due to poor data transmission conditions, such as noisy environment or out-of range.



**Conclusion**

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Simon Sing whose telephone number is (703) 305-3221. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang, can be reached at (703) 305-4895. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.



S.S.

09/29/2004

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